WHAT IS CLAIMED IS:

1. An exposure device using a GaN blue semiconductor laser as a light source, comprising:

a first limiting device, which limits a light beam which passes through, is provided between an active layer of the semiconductor laser and a coupling lens which is nearest to the active layer, and the first limiting device comprising a limiting direction being a direction orthogonal to the active layer of the semiconductor laser.

2. The exposure device of claim 1, wherein the first limiting device is relatively movable in the limiting direction to the light source.

3. The exposure device of claim 1, further comprising a second limiting device, which limits a light beam which passes through, is provided after the coupling lens, and the second limiting device comprising a limiting direction being a direction along the active layer of a laser crystal.

4. The exposure device of claim 1, wherein, given that a width of an opening of the first limiting device in the limiting direction is D, a distance from a light emitting

surface of the active layer to the first limiting device is L, and a spread angle of a beam from the light emitting surface is α, the exposure device is structured so as to satisfy:

$$D/\{2L \circ \tan(\alpha/2)\} \leq 2.0.$$

5. The exposure device of claim 1, wherein the first limiting device includes a slit formed in a plate.

6. The exposure device of claim 1, wherein the first limiting device includes a coupling lens whose numerical aperture is set under predetermined conditions.

7. The exposure device of claim 3, wherein the second limiting device is movable in the limiting direction of the second limiting device.

8. The exposure device of claim 3, wherein the second limiting device includes a slit formed in a plate.

9. The exposure device of claim 5, wherein the first limiting device which includes the slit is movable by a moving mechanism having a driving device which combines a stepping motor and a rack-and-pinion gear.

10. The exposure device of claim 8, wherein the second limiting device which includes the slit is movable by a moving mechanism having a driving device which combines a stepping motor and a rack-and-pinion gear.

11. An exposure device using a GaN blue semiconductor laser as a light source, wherein, given that a numerical aperture of a coupling lens nearest to a light emitting surface of an active layer of the blue semiconductor laser is NA and a spread angle of a beam from the light emitting surface is α, the exposure device is structured so as to satisfy:

$$NA \circ \tan(\alpha/2) \leq 2.0.$$

12. An exposure device which uses a GaN blue semiconductor laser as a light source, and which forms an image by irradiated light irradiated from the GaN blue semiconductor laser onto a photosensitive material using a silver halide, and which carries out gradation expression of the image by controlling a driving current of the GaN blue semiconductor laser and modulating an emission intensity of the irradiated light, wherein

a limiting device, which limits a light beam which passes through, is provided between a light emitting point of the GaN blue semiconductor laser and a coupling lens

which is nearest to the light emitting point,

a limiting direction of the limiting device is a direction orthogonal to an active layer of the GaN blue semiconductor laser, and

given that a width of an opening of the limiting device in the limiting direction is D, a distance from a light emitting point of the active layer to the limiting device is L, and a spread angle of a beam from the light emitting point is α, the exposure device is structured so as to satisfy:

$$D/\{2L \circ \tan(\alpha/2)\} \leq 1.8.$$

13. The exposure device of claim 12, wherein a predetermined driving current is always continuously applied to the GaN blue semiconductor laser, and even in a state in which there is no image signal, the GaN blue semiconductor laser emits light in an LED region.

14. The exposure device of claim 12, wherein the limiting device includes a slit formed in a plate.

15. The exposure device of claim 14, wherein the limiting device which includes the slit is movable by a moving mechanism having a driving device which combines a stepping motor and a rack-and-pinion gear.

16. An exposure device which uses a GaN blue semiconductor laser as a light source, and which forms an image by irradiated light irradiated from the GaN blue semiconductor laser onto a photosensitive material using a silver halide, and which carries out gradation expression of the image by controlling a driving current of the GaN blue semiconductor laser and modulating an emission intensity of the irradiated light, wherein

given that a numerical aperture of a coupling lens nearest to a light emitting point of an active layer of the GaN blue semiconductor laser is NA and a spread angle of a beam from the light emitting point is α, the exposure device is structured so as to satisfy:

$$NA \circ \tan(\alpha/2) \leq 1.8.$$

17. The exposure device of claim 16, wherein a predetermined driving current is always continuously applied to the GaN blue semiconductor laser, and even in a state in which there is no image signal, the GaN blue semiconductor laser emits light in an LED region.